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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,664	01/05/2001	Thomas Miller	328 P 530	4946

7590 05/03/2006  
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EXAMINER
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DABNEY, PHYLESHA LARVINIA

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/755,664

Applicant(s)

MILLER ET AL.

Examiner

Phylesha L. Dabney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 January 2001.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 47-58 is/are allowed.
- 6) ☒ Claim(s) 1-10, 18-33 and 41-46 is/are rejected.
- 7) ☒ Claim(s) 11-17 and 34-40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/17/02 & 9/5/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This action is in response to the application filed on 8 January 2001 in which claims 1-58 are pending, where claims 47-58 are newly added.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4, 7, 10, 28-30, 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Halteren et al (U.S. Patent No. 5,757,947).

Regarding claims 1-3, 10, 28-30, 33 van Halteren'947 teaches a receiver (figs. 1-5), comprising: an armature (11, 13); a diaphragm (2); and a closed loop (15-19) having an opposing first expanded and a second expanded regions, the first expanded region being joined to the second expanded region such that motion of the first expanded region in a first direction causes motion of the second expanded region in a second direction, different than the first direction, wherein the armature is operably attached to the first expanded region (lower area of 15-19) and the diaphragm (upper area of 15-19) is operably attached to the second expanded region.

Regarding claims 4 and 7, van Halteren'947 teaches the closed loop is comprised of a strap/wire (15).

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2. Claims 18-21, 24, 41-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Halteren et al (U.S. Patent No. 5,809,158).

Regarding claim 18-20 and 41-43, van Halteren' 158 teaches a receiver (figs. 1-5), comprising: an armature (11, 13); a diaphragm (2); an elliptical-like shaped spring (15-19) having a first axis and a second axis, each of the axes having a distal and a proximate end; the diaphragm operably attached to the elliptical-like shaped spring near the distal end of the second axis of the elliptical spring; and the armature operably attached to the elliptical-like shaped spring near the proximate end of the second axis of the elliptical spring, wherein the distal end is joined to the proximate end such that motion of the distal in a first direction causes motion of the proximate end in a second direction, different than the first direction.

Regarding claims 21, 24, and 44, van Halteren' 158 teaches the elliptical-like shaped spring is comprised of a strap/wire (15).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 5-6, 8-9, and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Halteren '947.

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Regarding claims 5, 8, and 31, van Halteren '947 does not teach the strap/wire is comprised of stainless steel. However, it is known to make hearing aid transducer parts of various metals, such as stainless steel, etc, to prolong life of the transducer and minimize corrosion. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a metal such as stainless steel in the invention of van Halteren to prolong life of the transducer and minimize corrosion effects.

Regarding claims 6 and 32, van Halteren'947 does not teach or exclude the shape of the strap to being a thickness ranging from  $5 \times 10^{-4}$  to  $3 \times 10^{-3}$  inch and a width ranging from  $10 \times 10^{-3}$  to  $20 \times 10^{-3}$  inch. However, the examiner takes official notice that it is known to use a strap with minimal thickness and width to fit the compact size of a hearing aid receiver and minimize the mechanical effects on the overall resonant frequency of the receiver. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a strap of any size not to exclude a thickness ranging from  $5 \times 10^{-4}$  to  $3 \times 10^{-3}$  inch and a width ranging from  $10 \times 10^{-3}$  to  $20 \times 10^{-3}$  inch for beneficially fitting within the compact hearing aid and minimizing mechanical effects.

Regarding claim 9, van Halteren'947 does not teach the teach or exclude the shape of wire to being a diameter having a range of  $2.0 \times 10^{-3}$  to  $5.0 \times 10^{-3}$  inch. However, the examiner takes official notice that it is known to use a wire with minimal diameter to fit the compact size of a hearing aid receiver and minimize the mechanical effects on the overall resonant frequency of the receiver. Therefore, it would have been obvious to one of ordinary skill in the art at the

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time the invention was made to construct a strap of any size not to exclude a diameter having a range of  $2.0 \times 10^{-3}$  to  $5.0 \times 10^{-3}$  inch for beneficially fitting within the compact hearing aid and minimizing mechanical effects.

4. Claims 22-23, 25-27, and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Halteren '158.

Regarding claims 22, 25, and 45, van Halteren'158 does not teach the strap is comprised of stainless steel. However, it is known to make hearing aid transducer parts of various metals, such as stainless steel, etc, to prolong life of the transducer and minimize corrosion. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a metal such as stainless steel in the invention of van Halteren to prolong life of the transducer and minimize corrosion effects.

Regarding claims 23 and 46, van Halteren'158 does not teach or exclude the shape of the strap to being a thickness ranging from  $5 \times 10^{-4}$  to  $3 \times 10^{-3}$  inch and a width ranging from  $10 \times 10^{-3}$  to  $20 \times 10^{-3}$  inch. However, the examiner takes official notice that it is known to use a strap with minimal thickness and width to fit the compact size of a hearing aid receiver and minimize the mechanical effects on the overall resonant frequency of the receiver. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a strap of any size not to exclude a thickness ranging from  $5 \times 10^{-4}$  to  $3 \times 10^{-3}$  inch and a width ranging from  $10 \times 10^{-3}$  to  $20 \times 10^{-3}$  inch for beneficially fitting within the compact hearing aid and minimizing mechanical effects.

Regarding claim 26, van Halteren'158 does not teach or exclude the shape of wire to being a diameter having a range of  $2.0 \times 10^{-3}$  to  $5.0 \times 10^{-3}$  inch. However, the examiner takes official notice that it is known to use a wire with minimal diameter to fit the compact size of a hearing aid receiver and minimize the mechanical effects on the overall resonant frequency of the receiver. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a strap of any size not to exclude a diameter having a range of  $2.0 \times 10^{-3}$  to  $5.0 \times 10^{-3}$  inch for beneficially fitting within the compact hearing aid and minimizing mechanical effects.

Regarding claim 27, van Halteren'158 teaches the elliptical-like shaped spring is comprised of stainless steel. However, it is known to make hearing aid transducer parts of various metals, such as stainless steel, etc, to prolong life of the transducer and minimize corrosion. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a metal such as stainless steel in the invention of van Halteren to prolong life of the transducer and minimize corrosion effects.

***Allowable Subject Matter***

5. Claims 47-58 are allowed. The following is a statement of reasons for the indication of allowable subject matter: The claims are composed of the limitations from independent claim 1 and previously objected to claim 35.

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6. Claims 11-17, 34-40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

7. Applicant's arguments filed have been fully considered but they are not persuasive.

8. With respect to the Applicant's argument that neither Van Halteren '947 nor Van Halteren '158 fails to teach *a closed loop or elliptical spring* and thus does not anticipate claims 1, 8, 28, or 41, the Examiner disagrees for the following reasons:

Van Halteren '947 (col. 2 line 65 through col. 3 line 14) teaches the loop (15-19) is used to limit deflection of the armature (11, 13) which implies that the loop is substantially providing a motion in a first direction and a counteracting motion in a second direction to provide opposing forces substantially enough to limit deflection and create a balanced system.

Furthermore, Van Halteren '158 (col. 3 lines 14-31) teaches the loop (15-19) is used to limit deflection of the armature (11, 13) which implies that the loop is substantially providing a motion in a first direction and a counteracting motion in a second direction to provide opposing forces substantially enough to limit deflection and balanced the system.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phylesha L. Dabney whose telephone number is 571-272-7494. The examiner can normally be reached on Mondays, Tuesdays, Wednesdays, Fridays 8:30-4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
P O Box 1450  
Alexandria, VA 22313-1450

**Or faxed to:**

(703) 273-8300, for formal communications intended for entry and for informal or draft communications, please label "Proposed" or "Draft" when submitting an informal amendment.

**Hand-delivered responses should be brought to:**

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 24, 2006

  
PLD



**SINH TRAN**  
**SUPERVISORY PATENT EXAMINER**